

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-027671**Date Inspected:** 31-May-2012**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site

<b>CWI Name:</b>	Andrew Keach and Bernie Docena			<b>CWI Present:</b>	<b>Yes</b>	<b>No</b>
<b>Inspected CWI report:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Rod Oven in Use:</b>	<b>Yes</b>	<b>No</b> <b>N/A</b>
<b>Electrode to specification:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Weld Procedures Followed:</b>	<b>Yes</b>	<b>No</b> <b>N/A</b>
<b>Qualified Welders:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Verified Joint Fit-up:</b>	<b>Yes</b>	<b>No</b> <b>N/A</b>
<b>Approved Drawings:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Approved WPS:</b>	<b>Yes</b>	<b>No</b> <b>N/A</b>
				<b>Delayed / Cancelled:</b>	<b>Yes</b>	<b>No</b> <b>N/A</b>
<b>Bridge No:</b>	34-0006			<b>Component:</b>	SAS Tower	

**Summary of Items Observed:**

Caltrans Office of Structural Material (OSM) Quality Assurance Inspector (QAI) Joselito Lizardo was present at the Self Anchored Suspension (SAS) job site as requested to perform observations on the welding of components for the San Francisco Oakland Bay Bridge (SFOBB) Project.

At Tower elevation 131 and 123 meter, QA randomly observed ABF/JV qualified Jeremy Dolman perform all position Shielded Metal Arc Welding (SMAW) fillet welding Crosby size number 4 padeye on tower skin plates. There were two padeyes being welded on tower skin plates A and E on tower shafts South and East while there are two only welded padeyes on tower skin plate A of tower shaft North and West. The padeyes are also being welded per Contract Change Order (CCO) #201 and per Caltrans approved drawing Tower Access Detail #30.

Prior welding, ABF foreman Rory Hogan was noted laying out the location of the padeyes. ABF personnel Alex Blanco was noted grinding off the paint on the tower where the padeye will be welded. After grinding, the same personnel preheated the tower skin plate to required temperature of more than 225°F. After reaching the required preheat temperature, ABF welder Jeremy Dolman performed the tack welding using SMAW with 3.2mm diameter E7018H4R electrode with measured working current of 128 amperes on the mentioned electrode.

As soon as the padeye is tack welded, the welder immediately preheated the tower skin plate and the padeye itself to the required preheat temperature of more than 225°F. The welder then fully fillet welded the Crosby Padeye to 5mm all around fillet using the same electrode and size. During fillet welding, ABF QC Andrew Keach was observed monitoring the preheat temperature and working current.

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## WELDING INSPECTION REPORT

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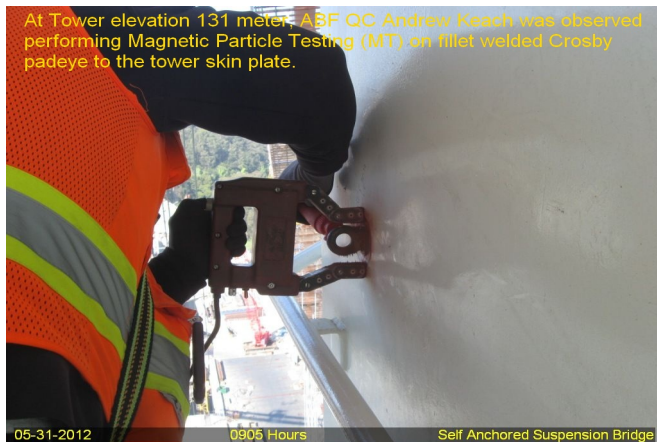
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At the end of the shift, the welder has completed fillet welding a total of 24 padeyes at tower four shafts elevation 119 and 109 meter.

At the request of Quality Control Field Supervisor, Bonifacio Daquinag, QA has randomly verified the QC VT/MT of the 5mm all around fillet weld joints between the Crosby padeye to tower skin plate. The QA verification was performed to verify that the welding and the VT/MT inspection performed by the QC inspector meet the requirements of the contract documents. At the conclusion of the QA verification it appeared that the weld and the QC inspection complied with the contract documents.

1. Tower elevation 135meter – Crosby padeye to tower skin plate 5mm all around fillet weld QA verified.
2. Tower elevation 131meter – Crosby padeye to tower skin plate 5mm all around fillet weld QA verified.
3. Tower elevation 123meter – Crosby padeye to tower skin plate 5mm all around fillet weld QA verified.

At Tower Base 13 meter external diaphragms, this QA noted ABF personnel removing run off tabs on various corner stiffeners using carbon air arc gouging. After the carbon air arc gouging on the stiffener run off tabs, other ABF personnel were noted grinding the gouged areas of the stiffener. Other welding related activity noted at 13 meter diaphragm include flush grinding on the welded cover of West and South external diaphragms W110 and W111 respectively in preparation for the Visual Test (VT) and the Magnetic Particle Testing (MT) to be performed by ABF QC and QA. During the shift, ABF QC Bernie Docena was noted monitoring the various activities being performed by ABF personnel. At the end of the shift, grinding of various corner stiffeners and flush grinding on the weld cover of PJP T-joints W110 and W111 were still continuing.

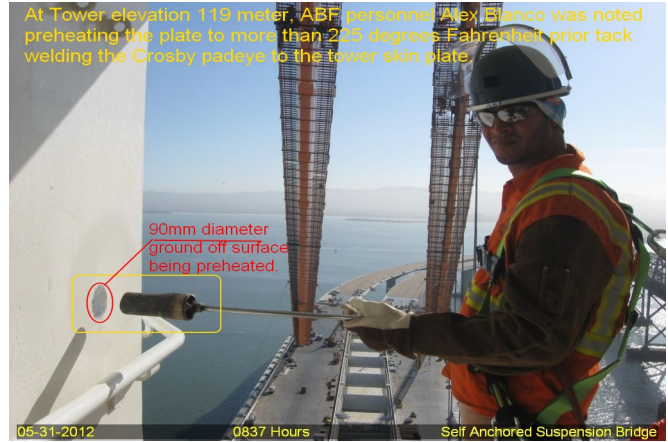


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# WELDING INSPECTION REPORT

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## Summary of Conversations:

No significant conversation occurred today.

## Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact SMR Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

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**Inspected By:** Lizardo, Joselito

Quality Assurance Inspector

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**Reviewed By:** Levell, Bill

QA Reviewer